

## Message Text

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60

ORIGIN SS-25

INFO OCT-01 ISO-00 SSO-00 NSCE-00 CIAE-00 DODE-00 INRE-00

ERDE-00 /026 R

DRAFTED BY ACDA/NWT:JRSHEA:BLM

APPROVED BY ACDA/NWT:TDDAVIES

C:WSHINN

NSC:JMAREUM

ERDA:FCHANATRY

OSD:TGEORGE/JLANDAUER

PM:EIFFT

JCS:JBOWDEN

CIA:JINGLEY

S/S: PSHANKLE

----- 067682

P 152312Z JUL 75

FM SECSTATE WASHDC

TO AMEMBASSY MOSCOW PRIORITY

S E C R E T STATE 166632

EXDIS

E.O. 11652:XGDS-3 IMPOSSIBLE TO DETERMINE

TAGS:PARM, US, UR

SUBJECT:TTBT/PNE NEGOTIATIONS

STATE PNE MESSAGE NUMBER THIRTEEN

1. RE DELEGATION REQUEST IN PARA 15 OF MOSCOW 8996. FOR DELEGATION BACKGROUND INFORMATION ONLY, VARIOUS U.S. STUDIES OVER THE PAST SEVERAL YEARS HAVE BEEN CONCERNED WITH THE TRANSPORT ACROSS NATIONAL BOUNDARIES OF RADIOACTIVE MATERIAL FROM PNE EXCAVATION EXPLOSIONS. OF PARTICULAR SIGNIFICANCE IS AN AUGUST 1969 CLASSIFIED INTERAGENCY WORKING GROUP STUDY ON THE IMPLICATIONS OF THE LTBT ON U.S. PLOW-SECRET

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SHARE (EXCAVATION) PROGRAM. IN THEIR REPORT THE GROUP CONCLUDED THAT THE LTBT WOULD REQUIRE MODIFICATION TO PERMIT FULL DEVELOPMENT AND UTILIZATION OF PEACEFUL NUCLEAR EXCAVATION EXPLOSIONS. IF SOVIETS ASK DELEGATION TO

DESCRIBE SUCH STUDIES, DELEGATION SHOULD AVOID SPECIFIC REFERENCE TO ANY U.S. INTERNAL STUDY SUCH AS THE ABOVE. HOWEVER, DELEGATION MAY REFER SOVIETS TO U.S. REPORTS PROVIDED TO THEM AT IAEA PNE TECHNICAL PANELS. FOR EXAMPLE, THERE ARE THE REPORTS REFERENCED IN IAEA PAPER (GOV/INF/290) ENTITLED "REVIEW OF ACTIVITIES IN CONNECTION WITH NUCLEAR EXPLOSIONS FOR PEACEFUL PURPOSES," 14 FEBRUARY 1975. PAPER HAS BEEN POUCHED. ANNEX OF THIS PAPER SUMMARIZES

TECHNICAL PAPERS PRESENTED AT FOURTH IAEA TECHNICAL PANEL, 20-24 JANUARY 1975. DELEGATION SHOULD AVOID ANY DISCUSSION WITH SOVIETS WHICH MIGHT OPEN UP QUESTIONS OF LTBT MODIFICATION OR AGREEMENT ON RADIOACTIVITY CRITERIA FOR NUCLEAR EXCAVATION EXPLOSIONS. HOWEVER, IF SOVIETS PURSUE QUESTION OF U.S. STUDIES, DELEGATION MAY ALSO, AS APPROPRIATE, POINT OUT TO SOVIETS IN LOW-KEY FASHION THAT RADIOACTIVE MATERIALS HAVE BEEN DETECTED BY THE US AT LONG RANGES FROM SOVIET EXCAVATION PNES, EVEN OF FAIRLY MODEST SIZE. FOR EXAMPLE, THE EVENT RECENTLY DESCRIBED BY THE SOVIETS AS CONSISTING OF THREE SIMULTANEOUS 15 KT CRATERING EXPLOSIONS PRODUCED RADIOACTIVE MATERIALS DETECTED BY THE US WELL BEYOND SOVIET BORDERS; THE US CALLED THIS INCIDENT TO THE ATTENTION OF THE SOVIETS IN AN AIDE-MEMOIRE SEVERAL YEARS AGO. FYI. ERDA/LLL PAPER BY TEWES DATED MARCH 28, 1975, ON RADIOACTIVITY RELEASES FROM SOVIET NUCLEAR DETONATIONS, PREVIOUSLY POUCHED TO DELEGATION, CONTAINS SPECIFICS ON THE AMOUNT OF LONG-RANGE RADIOACTIVITY. (PREVIOUS PAPER DATED JANUARY 29, 1975, TOGETHER WITH FEBRUARY 7, 1975 SUMMARY, BY TEWES, BROWNLEE, AND PETERSON, ON RADIOACTIVITY RELEASES FROM SOVIET NUCLEAR DETONATIONS: COMPARISON OF PEACEFUL CRATERING APPLICATIONS WITH WEAPONS TEST, CONTAINING MORE DETAILS, ALSO BEING POUCHED). ALSO FYI, ON JANUARY 21, 1969, THE SOVIETS PROTESTED BY AIDE-MEMOIRE A U.S. EXCAVATION EXPERIMENT CONDUCTED DECEMBER 8, 1968 (SCHOONER), ON THE BASIS THAT SINCE "RADIOACTIVE DEBRIS WENT OUTSIDE THE NATIONAL TERRITORY OF THE USA, THIS CONSTITUTED A VIOLATION OF THIS SECRET

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TREATY" (LTBT). END FYI.

2. RE PARA 10 OF MOSCOW 9267. THE INFORMATION BELOW CONCERNS THE ACCURACY OF SURVEYS OF DRILLED HOLES AND THE AECURACY OF THE QUOTED POSITION OF EMPLACED DEVICES:

A. ACCURACY OF SURVEYS OF DRILLED HOLES. THE ACCURACY OF SUCH INFORMATION DEPENDS UPON THE SPACING OF INDIVIDUAL LOCATION MEASUREMENTS AS A FUNCTION OF DEPTH, UPON THE CARE WITH WHICH SUCH MEASUREMENTS ARE TAKEN, AND UPON THE DEGREE OF MATHEMATICAL RIGOR APPLIED TO THE TREATMENT OF THE ACCUMULATED LOCATION VS DEPTH DATA. FOR A RELATIVELY VERTICAL HOLE, WE BELIEVE THE HOLE BOTTOM CAN BE

LOCATED WITH A PRECISION OF PLUS OR MINUS 0.25 FEET PER 1000 FEET OF DEPTH AND AN ACCURACY OF PLUS OR MINUS 0.50 FEET OF DEPTH. FOR DIRECTIONALLY DRILLED HOLES, DEVIATING FROM VERTICAL BY AS MUCH AS 20 DEGREES, PRECISION AND ACCURACY WOULD BE DEGRADED BY LESS THAN A FACTOR OF TEN SO THAT ACCURACY OF PLUS OR MINUS A FEW FEET PER 1000 FEET OF DEPTH SHOULD BE EXPECTED. ROUTINE SURVEY WORK AT SITES, CARRIED OUT WITHOUT PARTICULAR EMPHASIS ON MAXIMUM

ACCURACY, GENERALLY IS RELIED UPON TO PROVIDE ACCURACY OF ONE FOOT PER 1000 FEET OF DEPTH IN VERTICAL HOLES. AT THE CANNIKIN SITE ON AMCHITKA ISLAND, A SATELLITE HOLE WAS DRILLED CLOSELY ADJACENT TO THE MAIN EMPLACEMENT HOLE. BOTH HOLES WERE CAREFULLY SURVEYED, AND THE AZIMUTH AND DISTANCE FROM THE MAIN HOLE TO THE SATELLITE HOLE AT A DEPTH OF ABOUT 5800 FEET WAS DERIVED. A CROSS DRIFT WAS THEN MINED BETWEEN THE TWO, AND THE ACTUAL LOCATION OF THE SATELLITE HOLE WAS FOUND TO BE 4.5 FEET DISPLACED FROM THAT CALCULATED, USING THE SURVEYS OF THESE TWO HOLES. THIS 4.5 FOOT DISCREPANCY REPRESENTS THE INACCURACY OF SURVEYING A TOTAL OF ABOUT 12,000 FEET OF HOLE.

B. ACCURACY OF QUOTED POSITION OF DOWNHOLE EMPLACEMENT DEVICES.

THE ACCURACY OF THE QUOTED POSITION OF DOWNHOLE PACKAGES IS PRIMARILY DEPENDENT UPON, FIRST THE ACCURACY OF THE DOWNHOLE SURVEY, AND SECOND THE ACCURACY OF THE  
SECRET

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VERTICAL MEASUREMENT OF THE SUPPORTING WIRE ROPE CABLES. ACCURACY VARIES WITH PACKAGE WEIGHT. WITH REGARD TO SURVEY ACCURACY (DIRECT OPTICAL SURVEY, ACCOMPLISHED WITH TRANSIT, USING A LIGHTED TARGET), THE FOLLOWING APPLY: VERTICAL: PLUS OR MINUS TWO FEET PER 1000 FEET OF DEPTH. HORIZONTAL: FOR A CASED HOLE PLUS OR MINUS ONE INCH (INDEPENDENT OF DEPTH). FOR AN UNCASED HOLE, PLUS OR MINUS ONE FOOT (INDEPENDENT OF DEPTH). WITH REGARD TO THE ACCURACY OF MEASUREMENT (OF WIRE ROPE HARNESS CABLES AS PACKAGE IS LOWERED) THE FOLLOWING APPLY: VERTICAL: PLUS OR MINUS SIX INCHES PER 1000 FOOT DEPTH. HORIZONTAL: PLUS OR MINUS THREE INCHES (INDEPENDENT OF DEPTH).

AS A TYPICAL CASE, VERTICAL POSITIONING WOULD HAVE AN ACCURACY OF PLUS OR MINUS 2.6 INCHES PER 100 FEET. HORIZONTAL POSITIONING WOULD HAVE AN ACCURACY IN A CASED HOLE OF PLUS OR MINUS 4 INCHES AND IN AN UNCASED HOLE OF PLUS OR MINUS 15 INCHES.

3. REFERENCE PARAGRAPH NINETEEN, MOSCOW 9160. WE ASSUME THAT US REMARKS ON "CLEAR DIFFERENCE" BETWEEN WEAPONS TESTS AND EXCAVATION PILES WAS WITH REGARD TO CONCERN THAT

US PARTICIPATION IN SOVIET EXCAVATION PNE COULD IMPLICATE  
BOTH PARTIES IN ANY VENTING THAT LED TO LTBT VIOLATION.  
IF NOT, PLEASE ADVISE.

4. PRESUME MOSCOW 9526 SHOULD BE PNE MESSAGE NUMBER  
FIFTY. PLEASE ADVISE.

5. PARAGRAPH NINE OF MOSCOW 9817 AS TRANSMITTED READS AS  
FOLLOWS: "STOESSEL SAID HE HAD UNDERSTOOD MOROKHOV TO  
SAY USSR AGREEABLE TO INCLUSION OF EITHER SPECIFIC OR  
GENERAL COOPERATION PROVISION IN PNE AGREEMENT. HE ASKED  
IF USSR ENVISAGED ANY SPECIFIC EXAMPLES IN A GENERAL  
COOPERATION OF EITHER SPECIFIC OR GENERAL PROVISIONS, HE  
WAS TALKING ABOUT DIRECTION OF COOPERATION AND NOT ITS  
FORM. FORMER DIRECTION OF COOPERATION WOULD COVER SORTS  
OF ACTIVITIES ON WHICH SIDES WOULD COOPERATE, AND LATTER  
ITS FORM HOW SUCH COOPERATION WOULD BE CARRIED OUT." WE  
ASSUME THIS IS GARBLED. PLEASE RETRANSMIT. INGERSOLL

SECRET

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## Message Attributes

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**Capture Date:** 26 AUG 1999  
**Channel Indicators:** n/a  
**Current Classification:** UNCLASSIFIED  
**Concepts:** NEGOTIATIONS, NUCLEAR HAZARDS, NUCLEAR SAFETY, PEACEFUL NUCLEAR EXPLOSIONS, POLLUTION CONTROL, RADIATION MEASURING DEVICES  
**Control Number:** n/a  
**Copy:** SINGLE  
**Draft Date:** 15 JUL 1975  
**Decaption Date:** 28 MAY 2004  
**Decaption Note:** 25 YEAR REVIEW  
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**Disposition Authority:** KelleyW0  
**Disposition Case Number:** n/a  
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